On the Collective Algorithmic Unconscious

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1 Introduction

In the final years of his life, Bernard Stiegler (1952–2020) took stock of the pharmacological possibility (poison and cure, breakdown and breakthrough) of humanity's collective intelligence by turning to Russian geochemist Vladimir Vernadsky (1863–1945), Jesuit priest Teilhard de Chardin (1881–1955), and biologist Alfred J. Lotka (1880–1949), among others, to account for the biosphere or history of organic life on earth and to consider their respective senses of the noosphere[1] or 'terrestrial sphere of thinking substance' (Teilhard 1969: 151). For Vernadsky (1945), the noosphere – the 'terrestrial zone containing life' – was construed as negentropic *living matter* acting upon the earth – a process which resists or slows entropy, and in Teilhard's theosophy or terrestrial Gnosis, especially in his *Le phénomène humain* [*The Phenomenon of Man*] (1955), it was deemed 'the skin of the earth,' destined to reach a final spiritual Omega point. What Stiegler took from this was to envisage the noosphere as symbolising negentropic possibility or

[1] The noosphere – literally mind-sphere – is a concept which emerged in Paris, 1926. The mathematician Édouard Le Roy, French philosopher and student of Henri Bergson, Pierre Teilhard de Chardin (noosphere as 'thinking layer of the earth'), and Vladimir Vernadsky are all connected with elaborating upon the idea. It is said the idea was raised at the Sorbonne University in the 1920s. The noosphere concept sees life on Earth as a unity constituting the biosphere and geosphere, with the consciousness of life as a unity discontinuous but coextensive with life itself. It describes life's terrestrial evolution, which subsumes and transforms the biosphere. The human is *living matter realised* according to Vernadsky.

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bioinformational resistance to the entropic tendency of information as it is now disseminated on the World Wide Web.

Thinking the passage and connection from the biosphere, noosphere, to the technosphere and beyond, to the exosphere (exospherical control technologies or *Gestell* – the ring of satellites encircling the globe), Stiegler began to talk of the noetic necromass as emerging from the exosomatic humus, that is, dead living matter or humus housed in vast archives, ancient libraries, schools and universities, in other words, concrete forms of human knowledge or tertiary memory retentions stored and passed down the generations. He foresaw the necessity of a 'battle of intelligence' to retrieve from the noetic necromass the 'improbable' possibility of producing negentropic knowledge or positive bifurcation. For him, negentropic knowledge or positive bifurcation was a sign of resistance to the homogeneity of thinking, a means to slow the entropy or break up of knowledge. Positive bifurcation was a line of flight that somehow escaped the codification of established paradigms and patterns and could not thereby be anticipated. It expresses the singular as such. Stiegler was increasingly critical and pessimistic about the entropic tendency of Big Data corporations, so-called platform capitalism, and the trend towards algorithmic governmentality, which he claimed destroyed creativity and the possibility of difference as such. For Stiegler, the World Wide Web in its current iteration was destroying human knowledge through processes of homogenisation and standardisation through the reliance on algorithmic decision making.

For Stiegler, 'the astral figure of humanity' (Stiegler 1998: 89), the project of the becoming-astral of man, the spiritual elevation of (hu)mankind, was imperilled by this tendency. From my perspective, the promise of collective intelligence (Lévy 1999) is being derailed by a toxic, stupefied 'collective algorithmic unconscious' (my suggested concept to explain the mental ecology of the moment) – a process which appears hell bent on disseminating mental pollution of the very worst kind. Through his reading of Gilbert Simondon, Stiegler is at pains to stress that what is at risk is the destruction of the psychic and collective individuation, and with it the collective transindividuation of the noetic necromass. Due to widespread digitisation, Stiegler was concerned that 'the astral figure of humanity' was being transformed into a monstrous figure of posthuman becoming.

2 The Mechanosphere of Collective Intelligence

Writing in the 1980s and early 1990s on the cusp of the digital computer revolution, the psychiatrist and philosopher Félix Guattari discerned the opening up of 'new universes of reference' (*nouveaux univers de reference*) (2013) or universes of value and through them the transformation of perspective and scale. Simply, computer-mediated environments engineered new ways to perceive the world. Yet several decades on, critics claim, and we can include Stiegler among them, that such universes of reference have been handed over to the marketing industries and

information technology experts, with disruptive and deleterious results on the human imagination (Bradley 2020a; Bradley and Kennedy 2021).

The claim is that if we are given entirely over to information there is a corresponding deficit of knowledge production. According to Husserl, knowledge production has been the traditional preserve of 'the functionaries of the humanities' (Steinbock 1994: 585–584), of which philosophy is pivotal. Yet without pedagogical curation, without therapeutic and curative care by the functionaries of the humanities or the archivists of the knowledge (*savoirs*), what we are left with is collective amnesia, a forgetting of the noetic necromass, a crisis of the memory or what Stiegler calls the *mnemosyne* as such (Bradley 2021b). This is a diminishment of the improbable, or 'the unhoped-for coming of the immemorial' (Stiegler 2018).

3 Algorithmic Collective Unconscious

The grave consequence of this crisis of memory is that if less and less knowledge is passed down the generations, there is a corresponding disindividuation process, that is the proletarianization of knowledge, the loss of the *savoirs* – knowledge of how to do, to live, to think, to philosophise, and at its most extreme – with half of humanity now online across countries rich and poor – a vast planetary, collective unthinking. Through the severance of transindividuation circuits, Stiegler argues there is an emergent schism between the generations, a radical forgetting of knowledge and history, a dangerous forgetting of what is held in common, a disruptive forgetting of what it means to be human. Society as a consequence becomes more and more uncontrollable (Stiegler 2012) and life, more and more unliveable and more and more brutal and short.

It is indeed clear that biodigital and other advances are fundamentally altering what it means to be human and philosophical knowledge is less central in debates about the future of humanity. But there remains an agon of authorship over the future of the humanities of which philosophy is much involved. Let me point the reader to the remarks by the late Stephen Hawking who, in *The Grand Design*, pronounced that scientists 'have become the bearers of the torch of discovery in our quest for knowledge' (Hawking and Mlodoninow 2010: 5). In other words, philosophy is dead as science has answered all the metaphysical questions of (hu)mankind, of which 'what is it to be'? is pivotal. This rather provocative viewpoint comes only a few years prior to the World Congress of Philosophy[2] held in Beijing, China, 2018, where some 7000 scholars from across the globe met and discussed with humility the conference theme 'Learning to Be Human.' That philosophers still ruminate on the nature of the human in the time of technological advance strikes me that Hawking's dogmatic manifesto might be somewhat premature.

[2] See http://wcp2018.pku.edu.cn/yw/index.htm. Accessed 29 March 2021.

In this impasse of knowledge and reason, Stiegler's own antidote is to ask of the possibility of new forms of intellectual openness or negentropy – a kind of philosophical glasnost, if you like. For Stiegler, negentropy – the improbable as such – is a way to bring openness into the world and to resist its closure. Without openness nothing singular or exceptional enters. Faced with this prospect, what arguments can be made for the negentropic potential of human intelligence found in poetry, art and philosophy – in the humanities as such? What is the strength of the argument regarding the radical reorganisation on the World Wide Web, of information sharing and knowledge production? What does it mean to say as Stiegler argues that we must simply return to the 'base of knowledge' (Stiegler and Sloterdijk 2016)? To answer these questions let us turn to a critic of Stiegler's philosophy in the first instance.

4 On Collective Unthinking or Planetary Bêtise (Stupidity)

In *Morphing Intelligence: From IQ Measurement to Artificial Brains*, Catherine Malabou speaks of the necessity and prospect of building emancipatory forms of knowledge and the necessity of an 'emancipatory political vision of a cybernetic being … We must therefore work to build a fair and emancipatory political vision of a cybernetic being – together, bringing the relation of the two intelligences – natural and artificial – to its greatest affinity' (Malabou and Shread 2019: 123). Noting that French philosopher, cultural theorist and media scholar Pierre Lévy continues to foresee the possibilities of new educational configurations which might allow for the redefinition of the concept of collective intelligence itself, Malabou writes:

> Many sociologists and philosophers engaged in research into distance learning and web classes… believe that new educational configurations will allow us to redefine the concept of intelligence by breaking with the single-IQ model and opening it up to a wide variety of individuals very different in terms of age, nationality, language, expectations, desires, and pacing. (2019: 123–124)

Like Lévy, Malabou affirms the transformation of collective intelligence itself – both artificial and natural – even as it passes on to automatism and beyond. Her question concerning the future of education is a timely one as she asks: 'How can the "universal without totality" of cyberculture and collective intelligence be distributed among the different fields of knowledge without reestablishing new hegemonies and new centers?' (2019: 128). Here it is a question of warding off the new forms of domination which might emerge from extant systems of subjection. What comes from subjection – *subjects*. Malabou's (2020) answer is that Stiegler's criticisms regarding the current iteration of the World Wide Web do not hold up to critical scrutiny, as he does not satisfactorily account for the ambivalent commingling of symbolic and biological life, mind and machine. For her, binaries are disintegrating and fragmenting into ever more complex posthuman compositions. Malabou's point is that we are entering into a new paradigm of knowledge of sorts which is

non-representational and more performative, where the human and non-human entangle and become otherwise. Such a paradigm embraces modes of explanation whose logic is human-centred yet more-than-human. Such modes include the post-human, new and relational materialism, agential and speculative realism, decolonial theory, and indigenous philosophies.

Promoting a more productive and plastic sense of creativity against Stiegler's arguably more desperate and pessimistic world view, Malabou affirms the pharmacological integration of artificial intelligence and collective intelligence based on new forms of learning, for example, distance learning, and she suggests that Stiegler simply got it wrong on this question as he failed to note the incalculable pedagogic value of distance learning projects (on the perceived failed promise of MOOCs, see Stiegler 2003). While she finds the possibility of a new educational paradigm of cooperative learning or the 'autodidact society', that is the learning society of amateurs, and while Stiegler foregrounds the importance of curation of knowledge, Malabou is cautious to note the pharmacological dangers of 'technological automaticity associated with cyberspace encourages autonomy' (Malabou and Shread 2019: 126–127). She continues to see much that is positive in this form of autonomy.

Yet while Malabou tempers this enthusiasm, noting and following Jacques Rancière in *The ignorant schoolmaster (*Rancière and Ross 1999*)* that domination is a constant threat as the system of subjection (the *dispositif* – the heterogeneous mechanisms of capturing and transforming living beings into subjects) must itself be necessarily transformed to stop the reproduction of domination itself, she does not address the graver psychological effects of this form of autonomy. In this instance, Korean philosopher Byung Chul Han (2020) and Franco Berardi (2010) offer more compelling and committed views as they explore what is lurking behind such forms of apparent autonomy – that is, the endemic modern problem of isolation and loneliness. Indeed, for Lévy too, social domination is a function of cognitive speed and exploitation of memory (Peters 2015) and thus he is aware that there is much risk in the unfettered unfolding of collective intelligence.

Malabou writes that, '[e]ach individual is free to do as they wish there, to produce themselves and organise their knowledge as they see fit', yet the issue of endemic loneliness, addiction, attention disorders, perseveration (Csikszentmihalyi 2016) are not examined in detail in her work. Indeed, we can say that Malabou shares this overly optimistic vision of cyberspace with Michel Serres, who describes the so-called Thumbelina generation as rewriting the brains in glorious 'incandescent joy' (Serres and Smith 2015: 19): 'The learning process, which has fallen into the box, has left us the incandescent joy of invention. Has this condemned us to become intelligent?'

Furthermore, Malabou shares much with Lévy and his apparent boundless optimism for cyberspace which 'ceaselessly redefines the outlines of a mobile and expanding labyrinth that can't be mapped' (2019: 127). In other words, we can say that she finds much to celebrate in the 'mass collective hallucination' (as William Gibson famously calls it in his 1982 science fiction book *Burning Chrome*) of bioinformational cyberspace which becomes ever more universal, acentered and

non-totalisable. Let us now turn to Lévy to compare his extropian vision of collective intelligence before questioning the technophilic and uncritical embrace of cyberspace.

5 Romance of the Rhizome

Long an advocate of collective intelligence and the promise of cyberspace, and especially in his work in the early 1980s and 1990s which influenced his friend Félix Guattari a great deal, Pierre Lévy (1997, 1999, 2001) began to develop several theories including superlanguage, dynamic ideography, the cosmopedia or knowledge space, trees of knowledges, virtual worlds of shared significance. In them he celebrated the possibilities of augmented collective intelligence. Indeed, Lévy to this day remains optimistic about new forms of collective intelligence and enthusiastically describes Information Economy MetaLanguage (IEML) as a tool that utilises and transforms participatory digital memory into open forms of knowledge.

For Lévy, like Stiegler, the task is to develop tools which can resist the homogenisation of the World Wide Web. A new form of 'semantic coordinate system would take the human sciences one step further and increase our potential for collective intelligence' (Peters et al. 2020: 44). For example, IEML is a system for encoding meaning that can augment transparency, interoperability and the computability of operations that take place in digital memory. Lévy contrasts IEML with companies like Google and Facebook which promote artificial intelligence but always on the condition and basis to exploit data for commercial ends. IEML, on the other hand, deploys a semantic open dimension to create and transform meaning as well as its computability. Lévy writes of the necessity of *radical transparency*:

> The crucial condition of this epistemologico-political program is transparency, since this quality supports both the formalisation necessary for calculation and the critical reflexivity peculiar to philosophical humanism. But in this case, it is no longer a question of the ordinary transparency on which we agree without difficulty, but of *a radical transparency which aims at the molecular mechanisms of meaning production: linguistic semantics, interpretation in context, reference operations, coordinated emergence of authority and belief.* (Peters et al. 2020: 39) (emphasis added)

However, in a spirit less critical than Stiegler, Lévy speaks positively of the passage and evolution of knowledge to a fourth revolution in the augmentation of symbolic manipulation. Passing from (1) self-conservation, (2) the manipulation of symbols, (3) the mechanisation and industrialisation of the reproduction and diffusion of symbols, Lévy heralds a fourth era of augmentation and algorithmic acceleration:

> We are now at the beginning of a fourth revolution where a ubiquitous and interconnected infosphere is filled with symbols—i.e. data—of all kinds (music, voice, images, texts, programs, etc.) that are being automatically transformed. With the democratisation of big data analysis, the next generations will see the advent of a new scientific revolution … but this time it will be in the humanities and social sciences. The new human science will be

> based on the wealth of data produced by human communities and a growing computation power. This will lead to reflexive collective intelligence, where people will appropriate (big) data analysis, and where subjects and objects of knowledge will be the human communities themselves. (Lévy 2015: 750)

This progression seems consistent with the perspective of Michael Peters who sees Integrated World Capitalism (a concept of Guattari's) as passing to a fourth stage of capitalism, 'no longer oriented to producing primary (agricultural), secondary (manufacturing), or tertiary (services), but now oriented to the production of (signs, syntax, and … subjectivity' (Peters in Dillet et al. 2013: 377). Such apparent euphoria is clearly at odds with Stiegler who questions the new process of transindividuation, defined as how knowledge is passed down the generations, now seemingly by hand, now seemingly from mobile phone to mobile phone. Stiegler writes:

> Twenty-five years after the Web first appeared, a new process of transindividuation, assisted by networked computers that circulate information at near light speed and passing through exospheric infrastructures, continues to impose itself upon the hundreds of languages that constitute the semantic universe of humanity. (2020a: 182)

For her part, Malabou (2020) is sceptical about Stiegler's pessimism regarding impersonal, unscrupulous, algorithmic power and dismisses the argument that human inventiveness is something unique and somehow able to elude the reproduction or simulacra of cybernetic computation. For her, computers manifest forms of creativity indistinguishable from human creativity and she suggests that inherent to algorithmic power are forms of creativity beyond simulacra, beyond the repetition and predictable outcome of computer code. If this is true, this implies a degree of incalculability which Stiegler (2020a) argues is the sole preserve of the *error* of the human. If so, and miraculously, the inorganic comes to learn to think and to create.

Yet Malabou argues that the contrast made by Stiegler between quantitative 'calculation' and the qualitative 'improbable' does not hold: 'The subtlety of algorithmic calculation today derives precisely from the fact that it is capable of simulating noncalculation, that is, spontaneity, creative freedom, and the directness of emotion' (Malabou 2020: 150–151). On the other hand, Malabou is insistent that the development of artificial intelligence is the most important development in capitalism. It is the future of capitalism itself – the development of intelligence is coterminous with the development of capitalism. And it is here that Stiegler, Lévy and Malabou may enter into fruitful dialogue.

6 Utopian Impulse

Collective intelligence is defined as the capacity to cooperate intellectually in 'creation, innovation and invention' (Lévy in Peters 2015: 259) and Lévy explores how collective intelligence processes can be expanded by digital networks. It is 'a

scientific, technical and political project that aims to make people smarter with computers, instead of trying to make computers smarter than people' (Lévy in Peters 2015: 261). Lévy insists that the futural consequences of reflexive collective intelligence cannot be imagined fully today. In *Collective Intelligence,* Lévy affirms the 'dynamic period' from the 1990s to the present, in which cyberspace, a 'mode of creation and navigation within knowledge' (Lévy 1999: 10) has untold ramifications for human intelligence, which is becoming, and borrowing as Lévy does from Deleuze and Guattari, ever more deterritorialised.

As such a new model of humanity beckons. Influenced by Deleuze and Guattari, Lévy speaks of how 'nomadism of today reflects the continuous and rapid transformation of scientific, technical, economic, professional, and mental landscapes' (1999: xxiii). Here, we can find in the description of the deterritorialising vectors of virtualisation an offering of the utopian impulse. Indeed, cyberspace offers 'a new bearing, a new vision, a kind of Utopia: renewal of the social bond through our relation to knowledge' (1999: 11).

7 Noetic Necromass

Drawing on Vernadsky's *The Biosphere* of 1926 and Derrida's *La Vie la mort*, Stiegler derives the concept of the noetic necromass, which might be defined as the residue of biomass, understood as cell detritus, dead biomass, dead organic matter, dead phytomass, but Stiegler understands the concept in the context of the history of intelligence and the history of technics (*tékhnē*). In the time of the psychozoic era, the epoch of Reason, in the geological envelope of the earth, the noetic necromass is the gift of the past, the knowledge of the past, the gift of knowledge offered by the past to the coming generations. According to Ross (2020: 82), we can understand necromass as follows: 'the ancient organic remnants that have been turned from biomass into necromass, at the microcosmic scale forming the humus, and at the macrocosmic scale the pedosphere, which is to say, the set of complex elemental components forming an essential precondition to the continued existence of the biosphere' (2020: 82). For Vernadsky, the biosphere qua totality is formed from the biomass such as trees, animals, virus, bacteria etc. The biomass feeds on the necromass, that is dead matter, with the help of the Sun (Stiegler 2019). This becomes the humus which Vernadsky calls *inorganic organised matter* or dead living matter as such. Now as the noetic necromass for Stiegler is the accumulation and retention of human artefacts and new technical forms, the question is how to access this noetic necromass.

Schools and universities are institutions which can access the noetic necromass because they cultivate new forms of noetic life or knowledge. Stiegler insists the 'mission' of universities is to reconstruct deep attention with digital technologies of spirit and mind. Stiegler's point is that access to such noetic necromass is conditioned by technology and technics and in our time these forms of technology have turned toxic and entropic effectively curtailing the dissemination of negentropic knowledge.

And this is where he is more sceptical about the prospects of cyberspace and collective intelligence than Lévy.

For Stiegler, the distinction between what is properly the technosphere and biosphere no longer holds because what we are witnessing according to his *Nanjing Lectures* (2020a) is a kind of becoming technospheric of the biosphere – a passage to the exosphere, that is the system of low altitude satellites speeding around and above the earth. In other words, a colossal transformation of external memory – what he calls elsewhere the 'global mnemotechnical system' (Stiegler 2015; Bradley 2018) or what we can name concretely as neurotechnologies such as Elon Musk's Neuralink (Stiegler 2020b). Stiegler describes the current state of the technosphere as follows:

> [O] ur situation here and now, that is, in the biosphere in 2019, a biosphere that has become a technosphere, based not on libraries but on data centres, in which markets, along with universities, knowledge, technology and ways of life have all been globalised, and where proletarianisation and denoetisation, too, have become general and widespread. (Stiegler 2020a: 335)

And again tracing the passage from the biosphere, technosphere to exosphere and beyond, he states:

> This recursivity is that of which cybernetic feedback loops are the computational grammatisation, now effected through three billion smartphones spread across all continents of the biosphere, which has thus become a technosphere and an exosphere. (2020a: 293)

Access to the noetic necromass is dependent on technology and the history of technics but the trouble is that the current iteration of the World Wide Web and dominant forms of platform capitalism are destroying the noetic necromass through a process of generalised proletarianisation, a generalised loss of knowledge and skills – a process which 'reduces to dust' the noetic humus, that is the three million year-long transformation of the biosphere into the technosphere through exosomatic noesis – that is the storing of knowledge outside the living being of the human. In *Qu'appelle-t-on panser? 2. La leçon de Greta Thunberg,* Stiegler writes that an integral and generalised proletarianisation – accelerated by platform capitalism 'dries up and reduces to dust the noetic humus derived from the three million years of transformations of the biosphere into the technosphere' (Stiegler 2020a, b).[3] In stark language, Stiegler insists platforms such as Amazon, Google and Netflix have seized dominance and control over access to the noetic necromass and are accelerating its effective desertification. And as such, the noosphere – or world of thinking – is being destroyed, as it is dependent on necromass for its literal intellectual sustenance.

Straightforwardly, Stiegler is concerned that the knowledge of the past is not being passed on to future generations; it is turning to pure dust. The production of knowledge is completely overdetermined by automatisation. This has dramatic consequences because the noetic necromass contributes to the future forms of living noesis – that is, it opens paths toward the future. Under capitalism, the very passage

[3] Author's translation from French.

from the geosphere or biosphere to the noosphere or mechanosphere (according to Deleuze and Guattari and Lewis Mumford) is depleting the noetic atmosphere which emanates from the fertile but equally depleted fund of the noetic necromass.

Here we find a shared interest between Guattari and Stiegler. When Guattari writes that the 'current crisis of the media and the opening up of a postmedia era are the symptoms of a much more profound crisis' (Guattari and Genosko 1996: 266) his thoughts resonate with the contemporary moment in which the World Wide Web in its current iteration is precisely experiencing a crisis of its initial democratic formation and promise. For his part, Stiegler along with collaborator Sir Tim Berners Lee has called for a freer, more open and newer reconfiguration of information science, a new kind of communication. The hope is this will ward off a profound mental crisis that propagates endemic levels of Internet and game addiction, social withdrawal and loneliness.

To resist proletarianisation, the capturing of attention by the marketing industries, and the desertification of the noetic necromass, Stiegler calls for the reconstitution of the technosphere through a new pharmacological form of noodiversity – a process of the differentiation of knowledge. This is why he insists we must create dynamic open systems productive of bifurcations and of exceptions. Following Nietzsche's concern with the thermal and entropic death of the universe with the apocalyptic death of the Sun, Stiegler ruminates on the possibility of a new form of noosphere in the twenty-first century. In the wake of the Anthropocene era, he speculates on the pharmacological possibility-impossibility of a neguanthropic mutation of the biosphere (*une mutation néguanthropique de la biosphere)* into the noosphere or technosphere (Stiegler 2020b).

8 Mechanosphere

Before turning to Lévy and to his philosophical vision in which we find that the future global civilisation could be extensively and irredeemably based on the digital and exospheric interconnection of computers – and from which a new collective intelligence will emerge – let us add a comment about the mechanosphere in Deleuze and Guattari's philosophy because a distinction must be made between technics (*tékhnē*) and the machinic. Rejecting the dualism of nature and artifice and suggesting 'biological' evolution has always been a question of technics, Deleuze and Guattari insist in *A Thousand Plateaus*: '[t]here is no biosphere or noosphere, but everywhere the same mechanosphere' (Deleuze and Guattari 1987: 69; see also Ansell-Pearson 2012: 125). Deleuze and Guattari's theory of creative involution thus subsumes the noosphere or what we might call the World Brain (Wells 1938; Bradley 2018) under the term mechanosphere. Yet while Deleuze and Guattari find no telos in the noosphere (Lemmens 2018), this fact is important given Stiegler's recent emphasis on the work of Teilhard de Chardin and Vladimir Vernadsky.

For Genosko (2016: 43), the machine qua concept is not synonymous with Teilhard de Chardin's (or indeed Vladimir Vernadsky's or H.G. Wells's) sense of the

noosphere or World Brain because the noosphere or conscious mind, as a skin wrapped around the planet, is more akin to an 'etherialised version of the megamachine' as elaborated upon by Mumford in *The Myth of the Machine* (1970: 314). Yet if Genosko is right to question the idea that the noosphere is part of an evolutionary process not unlike Guattari's machinic evolutionism of 'collective apparatuses of subjectification' then a case can be made for thinking machinic collective intelligence as consistent with the noosphere. Indeed, Guattari in 1992 speaks of the necessity of a 'new planetary consciousness' and a new alliance with machines. This new planetary consciousness is described as a 'mec[h]anosphere surrounding our biosphere' (Guattari and Genosko 1996: 267). In other words, it is less 'the constraining yoke of an exterior armor' but rather the 'abstract, machinic efflorescence, exploring the future of humanity' (1996: 267–268).

9 World Philosophie

Writing on the brink of the new millennium in his *World philosophie: Le marché, le cyberespace, la conscience* [*World-Philosophy: Market, Cyberspace, Consciousness*], Lévy (2000) outlines his future vision of education and celebrates the very best of the human, claiming cyberspace – 'the great planetary virtual society' (2000: 74) – will accelerate the virtual cultivation of the human form: 'Culture has become a single urban fabric, economic, hypertextual, cognitive, techno-scientific, affective. The fabric of meaning gradually finds its unity in the noosphere' (2000: 176).[4] In the chapter *L'éducation du future*, Lévy describes the indefinitely expandable world of the human, and insists that the human is the first species to explore the 'infinity of sounds, images, ideas, tastes, perfumes, deeds, techniques, knowledge, forms of all kinds and the supreme infinity and that includes all others: the infinity of love' (2000: 177).

Cyberspace, collective consciousness, or the noosphere (he cites Teilhard de Chardin several times) can only help to expand consciousness and learning and will aid the conquering of new territories of experience or new terrains of consciousness. By uniting cyberspace and education there will be an awakening of humanity through new forms of accelerated learning which (hu)mankind has yet to witness. Although at times one suspects the euphoria got the better of him, Lévy speaks of the need for a humanistic education of the 'integral being' which can accelerate the expansion of 'the universal consciousness' (2000: 213–214). For the children of the third millennium, Lévy asks what universe of possibility will manifest through cyberspace and the evolving collective intelligence. What will be the consequence and what state of mind? He asks rhetorically: 'Do we want peaceful children? Full of love? Creative? Open? Aware? Evolving? Planetary? Let's just get out of the way

[4] Author's translation from French.

and lead by example. Let us give them the right education that we did not have. Let's innovate' (2000: 179).

This euphoria of vision and paean to capitalism can be compared to Stiegler's bleaker perspective which finds modern society leading to the 'massacre of innocence' (Tisseron et al. 2011). According to Stiegler, while the mobile phone and computer screens on which young people spend much of their free time have both toxic and curative pharmacological powers, it is neglectful in the extreme to hand children over to the whims of the market and advertising as this has catastrophic implications for the capture and domination of the attention of children – for their 'available brain time.' For Stiegler, youth are emotionally and mentally massacred by the advocates of the techno-extropian futural fantasy, that is, those extropian fanatics who idealistically proclaim everything will work out efficiently when we hand over learning to the computer, AI and the marketing industries. In both *Dans la disruption* [*The Age of Disruption*] (Stiegler et al. 2018) and *Qu'appelle-t-on panser? 2. La leçon de Greta Thunberg* (2020), Stiegler decries the experience of youth who view the world without future or horizon, who live without epoch. The desires of youth are clamped down, leading young people to be cut off from the world and leading them to turn into and upon themselves – as testified by the spiralling cases of hikikomori or social recluse in Japan and now elsewhere.

Compare this to *World philosophie* in which Lévy says (hu)mankind – in a kind of process of undermining and overmining (Harman 2016) – now delves into both the deep reaches of the cosmos and the micro universes of energy, of matter, of life itself (see Bradley 2020b). Communication and calculation tools have reached unimaginable levels of penetration and humanity is connected (and connected to the earth) like at no other time in history. There is simply an expansion of consciousness – if you like a self-consciousness of the role of Man by the collective mass of (hu) mankind as such – a fact never witnessed hitherto and of magnitudes which Teilhard de Chardin and Vladimir Vernadsky both affirmed. Lévy says: 'The more we travel, on the planet or in the books, on the Internet or in society around us, the more our mind opens' (2000: 52–53).[5] And again: 'Communication between men have doubled, reflected, multiplied in the interconnection between slowly deposited information in libraries and explodes today in cyberspace. There is only one hypertext document left' (2000: 52–53).[6] Sounding at times close to Vernadsky, Lévy says, (hu)mankind, given its technical and demographic power, has become the main agent of revolution for the whole biosphere (2000: 55).

What is interesting here is to understand Stiegler's philosophy of technology in light of Lévy's jubilant anthem and Vernadsky's geochemist work on the biosphere and noosphere. Why? As Stiegler thinks the noetic necromass in terms of the noosphere, what I want to question is the idea that the noosphere is emergent from the biosphere and the technosphere. All things being equal, is Stiegler a dyed-in-the-wool humanist? Is it possible to find a certain consistency between Stiegler and

[5] Author's translation from French.

[6] Author's translation from French.

Vernadsky on the role of the human in the time of the biosphere's collapse into the technosphere? I offer this provocation because Vernadsky in the 1940s argued that humanity was becoming the most powerful geological force on the planet given its unique consciousness and singular powers of reason and creativity – a view at odds with the more sceptical post-philosophical paradigm mentioned above. With this in mind, it seems that Stiegler reintroduces the concept of humanism – as Vernadsky explicitly does in his late speculations – precisely at the time when the Anthropocene and the posthuman paradigm displace the human figure from its centre and helm.

Sharing this interpretation of humanism, and we can find a sense of this in both Stiegler and Vernadsky, the chief question for Lévy is one of cybernetics and helmsmanship: 'Man leads all the biosphere in a cycle of rapid renewal. Now we dominate the biosphere. But is this we who serve the Earth or the life that uses us to evolve even faster?' (2000: 55).[7] Yet for him with the development of ecological awareness, the noosphere becomes visible in the form of cyberspace: 'Cyberspace is the ultimate metropolis, the world metropolis, the city of humans' (2000: 60).[8] This will continue as (hu)mankind has an 'extraordinary appetite for interconnection, which embraces choice, freedom, solidarity, interdependence and consciousness' (2000: 61).[9] In this apparent paean to capitalism, Lévy says the movement of the intellect, of cultural unification and spirituality would be incomprehensible and impossible if it were not accompanied by the simultaneous movement of world unification through the capitalist market and by the growth of a huge interconnected, planetary technocosmos.

As he says: 'The contemporary economy stems from a dynamic intelligence and collective consciousness and there is no separation of the technical and material activities from intellectual resources and the spiritual spell of (hu)mankind' (2000: 66).[10] The secret of the future human society, for Lévy, is the ability to listen and manipulate the collective consciousness that 'fluctuates' in the millions of channels of cyberspace (2000: 67).[11] Here Stiegler would surely intercede and insist that in Lévy's praise for the market there is no criticism of the marketing industries which capture and ruin desire.

Yet Lévy insists that it is through the new dynamic and circulating marketing industry that collective consciousness becomes aware of itself (2000: 67). As the virtuality of cyberspace knows no boundaries, this suggests for Lévy a dissolution of national and regional distinctions and the emergence of a single, open, plural, nomadic and deterritorialising collective consciousness or multitude: 'When there will be neither Orient nor West, then (hu)mankind will awaken its mind on the scale of collective consciousness' (2000: 153).[12] Indeed, he proclaims there is only one

[7] Author's translation from French.

[8] Author's translation from French.

[9] Author's translation from French.

[10] Author's translation from French.

[11] Author's translation from French.

[12] Author's translation from French.

spirit and humanity of dimensions 'omnidirectional, interior and exterior, East and West' (2000: 153)[13] and writes:

> The more consciousness is awake, the more it is free, the more it discerns potentialities in what is offered to it in contemplation and the more it generates a rich, living world. All of cosmic history is an exploration of potentialities present at the origin. The whole cosmic story is one of creation and it continues to be creation. (2000: 160)[14]

'The unique fire of consciousness' [*le feu unique de la conscience*] like for Teilhard de Chardin, is set alight when humanity reaches its zenith, its incendiary stage, its Omega point:

> Freed from memory by writing, we accelerated the story. Free from reason by computer calculation, we are in the process of bringing together our collective agency until we find out together what is most universal, most eternal and more concrete in the present moment, the light that shines and burns in him perpetually, the unique fire of consciousness. (2000: 170)[15]

All said and done, Lévy understands cyberspace or the noosphere is imperfect, and cannot be the sole panacea for (hu)mankind's woes rather as a gigantic algorithmic device able to deliver knowledge lightning fast, leading to the betterment of (hu) mankind:

> By organising the collective feedback of human consciousness, cyberspace accelerates everything. Conflicts, misfortunes, suffering, there will always be but this will become known more quickly. At least, we will know where we are and we can learn, just in time. (2000: 174)[16]

And again the collective algorithmic intelligence or noosphere will be able to predict or forecast the future. The noosphere will warn of disasters and ecological imbalances through 'the consciousness of Humanity, of Life, of Earth,' a consciousness radiating 'the joy of existing' (2000: 174–175).[17]In Lévy's phenomenologico-Hegelian phantasmagoria, cyberspace or collective intelligence is both subject and Substance. Absolute Knowledge is realised, the virtual and actual become one and the same, and through this process the unconscious gains self-understanding: 'In cyberspace, the collective unconscious becomes conscious, that is to say, it unites with itself, interconnects, defragments and unfolds in the integrated light of the virtual world' (2000: 175).[18] Moreover, the noosphere in its process of complexification is not only Hegelian but Spinozian:

> Imagine a single substance (to use Spinoza's word) turning on itself, bending, organising itself becoming more and more complicated until it produces ever more vibrant, sensitive qualities, then forms consciousness and conscious forms more vast and subtle, to finally

[13] Author's translation from French.

[14] Author's translation from French.

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[18] Author's translation from French.

> become aware of itself in the human who concentrates to the highest degree the creative power and the capacity of awareness of this unique substance. (2000: 208)[19]

Following Teilhard de Chardin, Lévy suggests cyberspace or collective intelligence is bound for an Omega point of perfection and love. Like Serres's view of Thumbelina, the biological gives way to the virtual or the noological in full hallucinatory incandescence and radiance. On its way to its ultimate destination, man touches the infinite in creation, perception and love:

> With the emergence of man, it is the universe that ignites and lights up itself… Hence this idea, so well expressed by Teilhard de Chardin, that the evolving cosmos is a sort of 'someone,' who converges on the human… We are not separated from the world. On the contrary, we are the most lively, the most sensitive, the most creative point. (2000: 298)[20]

10 Closing Remarks

Cyberspace or collective intelligence [the distinction seems to dissolve in Lévy's work] is the singularity, an event of creation and destruction which delivers over to the whole of (hu)mankind planetary love: 'As the universe moves away physically in the time of the Big Bang, human freedom takes the human to a spiritual Big Bang that transports him to the dimension of love' (2000: 217).[21] Verily, on this account, man is at his most incendiary stage. This protentional possibility of planetary love is contrary to the perspective of Stiegler who sees the very opposite of love in what I have called the collective algorithmic unconscious. Stiegler highlights the industrial exploitation of the drives by the marketing industries and claims there is an ever growing threat of the planetary-wide dissemination of stupidity (*bêtise*). In the loss of sublimation, there is a danger that desire itself can regress to the level of the drives. And again, from this there is a passage from control to uncontrollable societies. If noetic beings – that is mindful souls – that is those capable of care for the future – regress to the level of the drives the consequences are grave. There is no love only fury (Stiegler 2013), no mindful soul but only the contortion and distortion of desire. Desublimation liquidates the authority of the superego leaving only the 'hideous beast' (*la bête immonde*) (Stiegler 2012: 48).

In view of the question of the promise of collective intelligence, several critical thinkers from the continental tradition have been addressed to offer a necessary riposte to Lévy's sometimes overly optimistic position. Stiegler is a necessary thinker to temper this enthusiasm, as are writers such as Catherine Malabou, Félix Guattari, and Han Byung Chul, because they give greater attention to the pathological effects of collective unintelligence (hikikomori syndrome, addiction, the acting of violence) in the time of new knowledge ecologies. Rather than the collective

[19] Author's translation from French.

[20] Author's translation from French.

[21] Author's translation from French.

unconscious uniting with itself as Lévy says, the collective algorithmic unconscious breaks up, disconnects, fragments, implodes, and becomes ever more impenetrable and unfathomable. The depersonalisation of Freud's conception of libido and sublimation takes us over to a place where marketing holds sway.

With this in mind, it is timely to revisit Lévy's concept of collective intelligence (Lévy 1999) as well as Félix Guattari's affirmation of planetary computerisation in *The Three Ecologies* published in 1989 (Guattari 2014; see Andersen 2016). This is to understand their prescient work historically and to update it to the present moment. This would be to consider Stiegler's grasp of the pharmacological possibility and necessary reconfiguration of the World Brain (Bradley 2018, 2020c, 2021a) or 'global mnemotechnical system'. For in his despair about the current climate crisis and the Anthropocene, the state of education across the planet and the social and mental ills befalling youth, Stiegler, unlike Lévy, was realistic enough to grasp it was largely improbable to believe in a positive bifurcation that could arise from out of the World Wide Web in its current organisation. The improbable for him was a kind of necessary 'miracle,' the incomprehensible according to Deleuze, the singularity as such. For without this miracle, the collective bioinformational noosphere turns day by day into a vast blackhole of collective unthinking, where the 'collective algorithmic unconscious' as I have put it gains greater and greater opacity.

The 'collective algorithmic unconscious' draws out some of the desperate ramifications from the domination of Manuel DeLanda's Panspectron or what we have mentioned above as the exosphere. Manuel DeLanda offers the term Panspectron to describe the social diagramming practice of analytical algorithms linked to databases and networks (DeLanda 1991: 205). From his research on the history of war technologies, he developed the concept of panspectric surveillance and In *War in the Age of Intelligent Machines* (1991) DeLanda explains the concept of panspectrocism technologies as follows, differentiating his concept of the panspectron from Jeremy Bentham's panopticon – the famous diagram of surveillance famously elaborated upon in Foucault's *Disciple and Punish*. DeLanda writes:

> Instead of positioning some human bodies around a central sensor, a multiplicity of sensors is deployed around all bodies: its antenna farms, spy satellites and cable-traffic intercepts feed into its computers all the information that can be gathered. This is then processed through a series of "filters" or keyword watch lists. The Panspectron does not merely select certain bodies and certain (visual) data about them. Rather, it compiles information about all at the same time, using computers to select the segments of data relevant to its surveillance tasks. (DeLanda 1991: 206)

On this reading of the migratory history of intelligence from the human to the technological there is less promise of liberation and more the spectre of domination from the collective algorithmic unconscious. While some thinkers such as the British philosopher Nick Land speculate and indeed celebrate the forlorn drift of collective intelligence into 'efficient decentred communicative networks,' a process which leads inexorably to the collapse of education institutions (Land in Stivale 1998: 95), Stiegler contests this view and demands we rethink the nature of

collective intelligence and knowledge as such. We must return to the base of knowledge. I agree and think it is right to question the prospects of educational emancipation and subjection in light of the pharmakon of new knowledge ecologies and hegemonies and the foreboding suggestion of a collective algorithmic unconscious as the question 'Are we more autonomous or enslaved by collective intelligence?' remains desperately unanswered.

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